

**THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants: Wang et al.  
Appl. No.: 10/598,909  
Conf. No.: 1906  
Filed: September 14, 2006  
Title: DELIVERY OF FUNCTIONAL INGREDIENTS  
Art Unit: 1655  
Examiner: Qiuwen Mi  
Docket No.: 3712036-00753

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANTS' REPLY BRIEF**

Sir:

**I. INTRODUCTION**

Appellants submit Appellants' Reply Brief in response to the Examiner's Answer dated October 11, 2011 pursuant to 37 C.F.R. § 41.41(a). Appellants respectfully submit that the Examiner's Answer has failed to remedy the deficiencies with respect to the non-final Office Action dated June 29, 2011, as noted in Appellants' Appeal Brief filed on September 2, 2011, for at least the reasons set forth below. Accordingly, Appellants respectfully request that the rejection of pending Claims 1-8, 12-14 and 20-28 be reversed.

**II. THE REJECTION OF CLAIMS 1-8, 14, 20 AND 21 UNDER 35 U.S.C. §103(a) SHOULD BE REVERSED BECAUSE THE EXAMINER HAS FAILED TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS**

Appellants respectfully request that the Board reverse the rejection of Claims 1-8, 14, 20 and 21 under 35 U.S.C. §103(a) because the Examiner has still failed to establish a *prima facie* case of obviousness with respect to the cited references. In this regard, Appellants submit that the cited references fail to disclose or suggest each and every element of the present claims and that the skilled artisan would have no reason to combine the cited references to arrive at the present claims.

In the Examiner's Answer, the Examiner states that "since the vegetables were mixed with milk, pulverized, and strained . . . the vegetables are miscible, stable and dispersible in the aqueous milk system." See, Examiner's Answer, page 11, lines 11-13; and page 17, lines 14-16. Appellants respectfully disagree. Initially, Appellants note that the claims do not require that the material selected from the group consisting of whole fruit, vegetable material, plant material, and combinations thereof, be miscible, stable and dispersible in an aqueous system. Indeed, this would be the only portion of, for example, Claim 1 that would be comparable to the Examiner's statement that the "vegetables are miscible, stable and dispersible in the aqueous milk system." Instead, the claims are directed, in part, to a miscible primary composition comprising at least essential lipophilic and hydrophilic bioactive components in a carrier (e.g., milk, milk protein-containing carriers, and combinations thereof), wherein the miscible primary composition is stable, miscible and dispersible in an aqueous system.

Further, Appellants have demonstrated in the previously submitted *Declaration* that *Osanai* does not provide a miscible primary composition that is stable, miscible and dispersible in an aqueous system. Instead, and as supported by the *Declaration*, *Osanai* discloses a beverage containing cow's milk, rapa gourd, spinach and lemon, among other ingredients. Each of the embodiments of the beverage disclosed by *Osanai* at least includes approximately 22.5 grams of lemon. Moreover, lemon is an essential aspect of *Osanai*'s beverage as it supplies vitamin C in an amount that is not satisfied with the remaining elements of the beverage. See, *Osanai*, paragraph 12.

As supported by the *Declaration*, Appellants performed an experiment to determine the impact of lemon on cow's milk as taught by *Osanai*. The experiment showed that the addition of

22.5 grams of lemon to 100 ml of milk led to a precipitation/coagulation of a large portion of the milk proteins in the milk causing an obvious lack of miscibility. See, Exhibit A of the *Declaration*. Therefore, upon experimental testing to compare *Osanai*'s beverage against the claimed compositions, it is clear that *Osanai* does not provide a miscible primary composition that is stable, miscible and dispersible in an aqueous system.

The Examiner states that "[t]he *Declaration* . . . is insufficient to overcome the 103 rejection . . . because [Appellants' experiment] . . . has nothing to do with the cited reference *Osanai*." See, Examiner's Answer, page 12, line 20-page 13, line 1. The Examiner goes further to state that (i) "*Osanai* does not teach a composition comprising only lemon and cow's milk as shown in Exhibit A"; (ii) "the Exhibit A in the *Declaration* does not have the process of 'pulverizing it and mixing it, straining it in a strainer twice' as taught by *Osanai*"; and (iii) the *Declaration* does not have a negative control, for instance, the claimed composition does not have any precipitation as a comparison." See, Examiner's Answer, page 13, lines 1-5. Appellants respectfully disagree and submit that the *Declaration* is sufficient to rebut any establishment of a *prima facie* case of obviousness.

For example, the *Declaration* summarizes an experiment performed by Appellants to determine the differences between *Osanai* and the present claims. Since each of the embodiments of the beverage disclosed by *Osanai* at least includes approximately 22.5 grams of lemon, Appellants performed an experiment to determine the effects of the lemon when mixed with milk "according to the *Osanai* instruction." See, *Declaration*, Exhibit A. Although no other vegetables were added to the mixture of the experiment, Appellants respectfully submit that the skilled artisan would appreciate that the addition of other vegetables would not change the effect that the lemon has upon the milk. Indeed, the experiment was performed by a skilled artisan and demonstrates the deficiencies of *Osanai*, namely, that *Osanai* fails to disclose or suggest a miscible primary composition that is stable, miscible and dispersible in an aqueous system as recited, in part, by the present claims. Accordingly, Appellants respectfully submit that the *Declaration* is sufficient to overcome any *prima facie* case of obviousness.

In the Examiner's Answer, the Examiner states that "[t]he rejection is based on *Osanai* in view of Imaza[j]wa, references Edenharter et al, Faulks et al, and Hovari et al are only brought in to show the intrinsic properties of the product in *Osanai*." See, Examiner's Answer, page 14, lines 20-22. The Examiner further states that "Imazawa et al teach removing extraction slag by a

liquid cyclone” and that it is “evidenced by Imazawa et al that centrifuging step is well known in the art to remove extraction slags.” See, Examiner’s Answer, page 25, lines 10-13.

However, as discussed in detail in Appellants’ Appeal Brief, *Osanai* still fails to disclose or suggest a miscible primary composition that is stable, miscible and dispersible in an aqueous system as recited, in part, by the present claims. Thus, even if *Imazawa* discloses that use of a centrifuge is well known, Appellants respectfully submit that this fails to remedy the deficiencies of the cited references because the cited references still fail to disclose or suggest a miscible primary composition that is stable, miscible and dispersible in an aqueous system as recited, in part, by the present claims.

Further, for at least the reasons set forth in Appellants’ Appeal Brief filed September 2, 2011, the skilled artisan would have no reason to combine the cited references to arrive at the present claims. In this regard, the cited references are clearly directed to unrelated products or processes that have completely different objectives. Moreover, none of the cited references even recognizes the benefits obtained by the presently claimed compositions including, for example, improved bioavailability and miscibility of from extracted fruits or plant materials by milling the material in a milk or milk protein-containing carrier and centrifuging the milk or milk protein-containing carrier after milling of the fruit or plant materials to remove the insoluble fibers. Such treatments allow the essential lipophilic and hydrophilic bioactive components to have improved bioavailability and miscibility in the milk or milk protein-containing carrier. See, specification, page 4, lines 1-3.

Finally, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there exists no reason for the skilled artisan to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In fact, Appellants submit that what the Patent Office has done here is to apply hindsight reasoning by attempting to selectively piece together teachings of each of the references in an attempt to recreate what the claimed invention discloses. Indeed, the skilled artisan must have a reason to combine the cited references to arrive at the present claims. Appellants respectfully submit that such a reason is not present in the instant case.

In sum, not only do the cited references fail to disclose or suggest each and every element of the present claims, but the skilled artisan would have no reason to arrive at the claimed invention using the cited references in the absence of hindsight.

Accordingly, Appellants respectfully submit that Claims 1-8, 14, 20 and 21 are novel, nonobvious and distinguishable from the cited references and are in condition for allowance. As such, Appellants respectfully request that the obviousness rejection of Claims 1-8, 14, 20 and 21 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

**III. THE REJECTION OF CLAIMS 1-8, 12-14 AND 20-28 UNDER 35 U.S.C. §103(a) SHOULD BE REVERSED BECAUSE THE EXAMINER HAS FAILED TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS**

Appellants respectfully request that the Board reverse the rejection of Claims 1-8, 12-14 and 20-28 under 35 U.S.C. §103(a) because the Examiner has still failed to establish a *prima facie* case of obviousness with respect to the cited references. In this regard, Appellants submit that the cited references fail to disclose or suggest each and every element of the present claims and that the skilled artisan would have no reason to combine the cited references to arrive at the present claims.

In the Examiner's Answer, the Examiner discusses Appellants' arguments with respect to *Hong*, but fails to comment further on the disclosure of *Hong*. See, Examiner's Answer, page 17, line 17-page 19, line 8. As discussed above, as well as in Appellants' Appeal Brief filed September 2, 2011, *Osanai*, *Edenharder*, *Faulks*, *Hovari* and *Imazawa* fail to disclose or suggest each and every element of the present claims. *Hong* fails to remedy the deficiencies of *Osanai*, *Edenharder*, *Faulks*, *Hovari*, and *Imazawa* because *Hong* also fails to disclose or suggest a miscible primary composition comprising a milk-based carrier that is stable, miscible and dispersible in an aqueous system as recited, in part, by independent Claims 1, 12, 14 and 22. *Hong* also fails to a freeze-dried, miscible powder comprising essential lipophilic and hydrophilic bioactive components of a material from whole fruit, vegetable material and/or plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier as recited, in part, by independent Claim 12.

Although *Hong* discloses a soy oil and rice milk, vegetable-based composition including fermented lactobacillus, the lactobacillus is not an essential lipophilic and hydrophilic bioactive components of a material from whole fruit, vegetable material and/or plant material, excluding insoluble fibers. As such, *Hong* also fails to disclose or suggest the presently claimed miscible

primary composition comprising a milk-based carrier that is stable, miscible and dispersible in an aqueous system as recited, in part, by independent Claims 1, 12, 14 and 22.

Additionally, although *Hong* discloses the freeze-drying of a fermented milk to increase the survival rate of a lactobacillus bacteria, such a powdered fermented milk is not a freeze-dried, miscible powder comprising essential lipophilic and hydrophilic bioactive components of a material from whole fruit, vegetable material and/or plant material, excluding insoluble fibers, in a milk or milk protein-containing carrier as recited, in part, by independent Claim 12. As such, *Hong* fails to remedy the deficiencies of *Osanai*, *Edenharder*, *Faulks*, *Hovari*, and *Imazawa*. As such, the cited references fail to disclose or suggest each and every element of the present claims.

Further, for at least the reasons set forth above, as well as in Appellants' Appeal Brief filed September 2, 2011, the skilled artisan would have no reason to combine the cited references to arrive at the present claims. Therefore, not only do the cited references fail to disclose or suggest each and every element of the present claims, but the skilled artisan would have no reason to arrive at the claimed invention using the cited references in the absence of hindsight.

Accordingly, Appellants respectfully submit that Claims 1-8, 12-14 and 20-28 are novel, nonobvious and distinguishable from the cited references and are in condition for allowance. As such, Appellants respectfully request that the obviousness rejection of Claims 1-8, 12-14 and 20-28 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

#### IV. CONCLUSION

For the foregoing reasons, Appellants respectfully submit that the Examiner's Answer does not remedy the deficiencies noted in Appellants' Appeal Brief with respect to the non-final Office Action. Therefore, Appellants respectfully request that the Board of Appeals reverse the obviousness rejections with respect to Claims 1-8, 12-14 and 20-28.

No fee is due in connection with this Reply Brief. The Director is authorized to charge any fees that may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 3712036-00753 on the account statement.

Respectfully submitted,

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